

Attendance: Gary Toller, Bill Barnes, Aisheng Wu, Junqiang Sun, James Kuyper, Hongda Chen, Jack Xiong, Eric Vermote, Chris Moeller, Brian Wenny

Scheduled Agenda**Item 1: Recent L1B LUT delivery**

- Terra forward update – 5.0.40.24 (05/22/09) – m1, RVS
- Terra Collection 6 update – 6.1.0.2 (05/29/09)

Item 2: Instrument status

- Terra and Aqua MODIS are in nominal operations.
- Aqua Band 30 Detector 3 displayed a sudden increase in noise after passage through the SAA on 2009135.2045. The NEdT remained elevated (no change in b1) for a period of about 6 days before returning to pre-anomaly stable value. On a granule average basis the elevated NEdT was just below specification. During the six day period 20-30% of scans within a granule were out of specification. No QA status change is required at this time.

Item 3: MCST recent activities

- Collection 6 Summary
 - In anticipation of the beginning of L1B science testing for Collection 6 a short summary of all major changes incorporated into C6 was presented. A detailed package describing each change will be posted on the MCST website.
 - QA changes
 - Fill values used in C6 for inoperable detectors instead of interpolated values from adjacent good detectors. Bill suggested an offline tool be made available for users to perform interpolation if desired to create non-fill value L1B images.
 - A new QA LUT was developed to allow QA flags on a subframe level. Currently in C6: Terra Band 2 Detectors 29 & 30, subframe 1 is flagged as noisy.
 - Terra Band 5 Detector 17 flagged as inoperable over mission lifetime.
 - Special QA LUT for Atmosphere group – containing time dependent QA index based on detector noise level categories.
 - TEB changes
 - The major change is to the strategy used to derive the A0 and A2 coefficients. For Aqua, the only change is A0=0 and A2 from BB Cooldown for bands 31 & 32. For Terra, the coefficients will be derived from the BB Cooldown activities except for bands 29, 31-36 have A0=0. Bill asked for the reasons behind the switch to using cooldown activities. Jack/Brian: The cooldown activity is a passive process of the BB with minimal temperature gradients over the surface of the BB. Cooldown coefficients are closer to prelaunch values. Testing indicated use of the new coefficients improved performance for low temperature scenes (a cold scene bias was observed for comparisons between Aqua MODIS and AIRS).
 - Band 21 b1 coefficients were reprocessed over instrument lifetime using BB cooldown data.
 - The temperature at which the switch from scan-by-scan b1 to default b1 occurs was adjusted (increased) slightly for Aqua Bands 33,35 & 36. New values based on review of on-orbit lifetime saturation temperatures of these bands during the BB warmup/cooldown process.
 - L1B code change implemented to correct anomalous TEB scans that occur during Sector Rotation events.
- RSB changes

- Degradation of the SDSM detector 9 (936 nm) considered in the SD degradation calculation. In C5, it is assumed there is no SDSM D9 degradation.
- RVS – 1) the difference between prelaunch and on-orbit is accounted for; 2) detector dependent RVS applied for bands 3, 4, 8-16; 3) A time dependent RVS for Terra bands 17-19 is applied.
- Detector dependent $\Delta m1$ correction applied to bands 3, 4, 8-16 – expected to reduce striping.
- All fitting algorithms reviewed and improved.
- An alternative approach to deriving RVS using EV data is applied to Terra bands 3, 8, and 9. This alternate LUT was provided to the Ocean Color group for testing.
- A polarization correction LUT is provided for off-line processing by users (available through Ocean Color website).

Item 4: Around the Table

- Chris inquired about the SD degradation for bands 5-7. Jack: At this time we assume no SD degradation for these bands as it is expected to be very small. No SDSM detectors have the appropriate wavelength so cannot directly verify this assumption. An approach using lunar and EV desert data is being considered to explore this issue.

Next Meeting: ~June 17, 2009